

CSV and GIS Technical Guidelines

& examples for Provider Submission Data Portal

The preferred file format for reporting Fixed Broadband data is in CSV or comma-delimited text file. Each value is separated by commas and stored in a simple text file with the .csv file extension.

All fixed broadband providers are required to report coverage by address. For simplicity and enhanced anonymity, providers are highly suggested to use the unique identifier of all addresses from the Virginia Geographic Information Network (VGIN). Providers can download the VGIN shapefile from the [VGIN Site Address Point database](#). VGIN's shapefiles have the full addresses for providers to match up with the ADDRESS_POINT_ID. Failure to provide address information in the format of ADDRESS_POINT_ID may result in an incorrect submission.

Table 1: Fields in Provider Submitted Data.

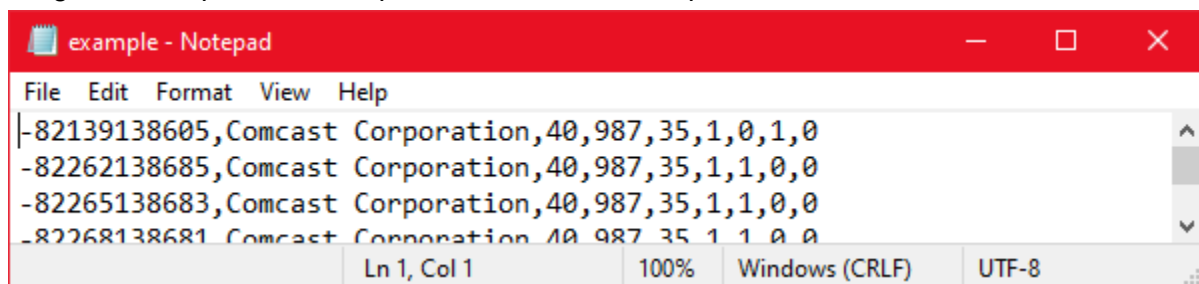
Field	Description	Type (GIS)	Example
ADDRESS_POINT_ID	VGIN Unique Identifier for every address in Virginia	Text	-82139138605
PROVIDER	Internet Service Provider, Name of the entity customers could contact to purchase service in this area	Text	Comcast Corporation
TECHCODE	Technology of Transmission FCC Form 477 guideline https://transition.fcc.gov/form477/FBS/formatting_fbs.pdf : 10 = Asymmetric xDSL 20 = Symmetric xDSL* 30 = Other Copper Wireline (all copper-wire based technologies other than xDSL; Ethernet over copper and T-1 are examples) 40 = Cable Modem 50 = Optical Carrier / Fiber to the end user (Fiber to the home or business end user, does not include "fiber to the curb") 60 = Satellite 70 = Terrestrial Fixed Wireless 83 = (Mobile Only) 4G/LTE 89 = (Mobile Only) 5G 90 = Electric Power Line 0 = All Other	Integer (short)	40
MAXDOWN	Maximum advertised download speed provided to location (in	Float	987

	Mbps)		
MAXUP	Maximum advertised upload speed provided to location (in Mbps)	Float	35
LATENCY	Above the threshold (less than or equal to 100 ms, based on the 95th percentile of measurements) = 0 for No; 1 for Yes	Text	1
RESIDENTIAL	Is the service provided at this location a residential address? = 0 for No; 1 for Yes	Text	0
BUSINESS	Is the service provided at this location a business address? = 0 for No; 1 for Yes	Text	1
MOBILE_RSRP	(Mobile Providers Only) RSRP values at address in 10dB increments or finer. Between -50 dBm and -120 dBm (0 for non-mobile providers) (in dBm)	Integer (short)	0

The CSV (comma-delimited) file should look like this in Notepad or other similar simple text editors. The fields should be as follows:

ADDRESS_POINT_ID,PROVIDER,TECHCODE,MAXDOWN,MAXUP,LATENCY,RESIDENTIAL,BUSINESS,MOBILE_RSRP

Image 1: Example CSV file opened in Microsoft Notepad.



GIS Standards

1. The shapefiles should be in points. If using polygons, all map areas will need to have complete polygons with single unique identifiers. They should be closed and non-overlapping. The polygons should only cover the addresses with broadband coverage.
2. The geometries should conform to the two-dimensional OGC (Open Geospatial Consortium) rules.
3. The shapefiles must include .shp, .shx, .dbf, and .prj files.
4. The shapefiles must use NAD 1983 geographic coordinates and VA_Lambert_Conformal_Conic projected coordinate system.
5. The shapefiles should be submitted with the following fields:

OBJECTID: *Automatically generated by GIS software* = Object ID
 PROVIDER = Text
 ADDRESS_POINT_ID = Text
 TECHCODE = Integer
 MAXDOWN = Float
 MAXUP = Float
 LATENCY = Text
 RESIDENTIAL = Text
 BUSINESS = Text
 MOBILE_RSRP = Text

Image 2: Fields Table in ArcGIS Pro.

<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Read Only	Field Name	Alias	Data Type	<input checked="" type="checkbox"/> Allow NULL	<input type="checkbox"/> Highlight	Number Format	Domain	Default	Length
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	OBJECTID	OBJECTID	Object ID	<input type="checkbox"/>	<input type="checkbox"/>	Numeric			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ADDPTKEY	ADDRESS_POINT_ID	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				20
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PROVIDER	PROVIDER	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				255
<input checked="" type="checkbox"/>	<input type="checkbox"/>	TECHCODE	TECHCODE	Short	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MAXDOWN	MAXDOWN	Float	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MAXUP	MAXUP	Float	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LATENCY	LATENCY	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	RESIDENTIAL	RESIDENTIAL	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	BUSINESS	BUSINESS	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MOBILE_RSRP	MOBILE_RSRP	Short	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric			

Image 3: Example Attributes Table Displayed in ArcGIS Pro.

	OBJECTID *	ADDRESS_POINT_ID	PROVIDER	TECHCODE	MAXDOWN	MAXUP	LATENCY	RESIDENTIAL	BUSINESS	MOBILE_RSRP
1	32	-82139138605	Comcast Corporation	40	987	35	1	0	1	0
2	43	-82108138622	Comcast Corporation	40	987	35	1	1	0	0
3	44	-82104138624	Comcast Corporation	40	987	35	1	1	0	0
4	34	-82100138626	Comcast Corporation	40	987	35	1	1	0	0
5	40	-82097138628	Comcast Corporation	40	987	35	1	1	0	0
6	33	-82110138627	Comcast Corporation	40	987	35	1	1	0	0
7	38	-82106138628	Comcast Corporation	40	987	35	1	1	0	0
8	37	-82103138629	Comcast Corporation	40	987	35	1	1	0	0
9	36	-82099138632	Comcast Corporation	40	987	35	1	1	0	0
10	35	-82112138631	Comcast Corporation	40	987	35	1	1	0	0
11	41	-82108138633	Comcast Corporation	40	987	35	1	1	0	0
12	42	-82105138635	Comcast Corporation	40	987	35	1	1	0	0
13	39	-82102138637	Comcast Corporation	40	987	35	1	1	0	0
14	45	-82073138641	Comcast Corporation	40	987	35	1	1	0	0